

What is claimed is:

1 1. A radial vibration detection apparatus for
2 detecting the radial vibration value of an optical
3 assembly of an optical disc drive, the optical assembly
4 having a turntable, the turntable having a first part and
5 a second part connected thereto, the first part having an
6 iron element and a plurality of clamp elements extended
7 to the second part, the radial vibration detection
8 apparatus comprising:

9 a cover having a cover body, a plurality of engaging
10 elements and a circumferential flange, the
11 engaging elements disposed on the lower surface
12 of the cover body in an equiangular manner, the
13 circumferential flange is formed on the cover
14 body, the cover body having a magnet
15 accommodating portion formed on the center
16 thereof, wherein a first positioning element is
17 disposed on the circumferential flange, and
18 each of the engaging elements has a first
19 sloped surface and a through hole;

20 a magnet disposed in the magnet accommodating
21 portion;

22 a plurality of clamping structures sliding and
23 disposed in the through holes of the engaging
24 elements, respectively; and

25 a base disposed under the cover and having a bottom,
26 a circumferential wall and a second positioning
27 element, the circumferential wall upwardly
28 formed on the bottom, the second positioning

29 element disposed on the circumferential wall to
30 engage the first positioning element disposed
31 on the circumferential flange of the cover,
32 wherein the bottom is formed with a fitting
33 hole and a plurality of through grooves, the
34 fitting hole formed on the center of the bottom
35 and accommodating the turntable, and the
36 through grooves formed on the bottom in a
37 radial and equiangular manner and corresponding
38 to the clamp elements of the turntable.

1 2. The radial vibration detection apparatus as
2 claimed in claim 1, wherein each clamping structure
3 further comprises a linking shaft, a retardant element
4 and a retaining element, the linking shaft fitted in the
5 through hole of each engaging element, the retardant
6 element and retaining element connected to two opposite
7 ends of the linking shaft, respectively, and the
8 retardant element pushing against the second part of the
9 turntable.

1 3. The radial vibration detection apparatus as
2 claimed in claim 1, wherein the first positioning element
3 is a through hole.

1 4. The radial vibration detection apparatus as
2 claimed in claim 3, wherein the second positioning
3 element is a column.

1 5. The radial vibration detection apparatus as
2 claimed in claim 1, wherein the first positioning element
3 is a column.

1 6. The radial vibration detection apparatus as
2 claimed in claim 5, wherein the second positioning
3 element is a through hole.

1 7. The radial vibration detection apparatus as
2 claimed in claim 2, wherein the retardant element further
3 comprises a second sloped surface matching the first
4 sloped surface of each engaging element.

1 8. The radial vibration detection apparatus as
2 claimed in claim 1, wherein the bottom of the base
3 further comprises a plurality of spaced portions, the
4 engaging elements located on the spaced portions.

1 9. The radial vibration detection apparatus as
2 claimed in claim 1, further comprising a measuring tool
3 placed on the outer surface of the circumferential wall
4 of the base to detect the radial vibration value.

1 10. The radial vibration detection apparatus as
2 claimed in claim 9, wherein the measuring tool is a
3 probe.